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AIR QUALITY GENERAL CONSTRUCTION PERMIT

PERMIT NUMBER: GCP-EMENG-1

Permit Name: Emergency Engine 1

Project Description: Construction of emergency engine(s).

Typical Standard Industrial Classification (SIC) Code: Various

Pursuant to Chapter 14 of the Nebraska Air Quality Regulations, the public has been notified by prominent advertisement of the proposed construction of air contaminant sources meeting the specific criteria of this general construction permit and the thirty (30) day period allowed for comments has elapsed. This general construction permit approves the construction of specific types of Emergency Engines. This permit document and the associated application make up the complete permit for the specific source identified in the application.

Compliance with this permit shall not be a defense to any enforcement action for violation of an ambient air quality standard. The permit holder, owner, and operator of the facility shall assure that the installation, operation, and maintenance of all equipment is in compliance with all of the conditions of this permit.

The undersigned issues this permit on behalf of the Director under the authority of Nebraska Administrative Code Title 129 – Nebraska Air Quality Regulations as amended July 6, 2015.

3/30/16
Date

Shelley Schneider
Shelley Schneider, Air Administrator
Air Quality Division



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EP-ENGINES A-1

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ABBREVIATIONS, SYMBOLS, and UNITS OF MEASURE

AP-42	Compilation of Air Pollutant Emission Factors, Volume I, Stationary Point and Area Sources	NAAQS	National Ambient Air Quality Standards
BACT	Best Available Control Technology	NDEQ	Nebraska Department of Environmental Quality
bhp	Brake Horsepower	NESHAP	National Emission Standards for Hazardous Air Pollutants
BMP	Best Management Practice	NO ₂	Nitrogen Dioxide
Btu	British Thermal Unit	NO _x	Nitrogen Oxides
bu	Bushel	NSPS	New Source Performance Standard
CAA	Clean Air Act	NSR	New Source Review
CE	Control Equipment	PAL	Plant-wide Applicability Limit
CEM	Continuous Emissions Monitor	Pb	Lead (chemical abbreviation)
CEMS	Continuous Emissions Monitoring System	PbR	Permit-by-Rule
cf	Cubic feet	PEMS	Parametric Emissions Monitoring System
CFR	Code of Federal Regulations	PM	Particulate Matter
CO	Carbon Monoxide	PM ₁₀	Particulate Matter with and aerodynamic diameter equal to or less than 10 microns
CO ₂	Carbon Dioxide	PM _{2.5}	Particulate Matter with and aerodynamic diameter equal to or less than 2.5 microns
CO ₂ e	CO ₂ equivalent	ppb	Parts per Billion
CP	Construction Permit	ppm	Parts per Million
DGS	Distiller's Grains with Solubles	ppmv	Parts per Million by volume
DDGS	Dry Distillers Grains with Solubles	ppmvd	Parts per Million by volume, dry basis
dscf	Dry Standard Cubic Feet	PSD	Prevention of Significant Deterioration
dscfm	Dry Standard Cubic Feet per Minute	PTE	Potential to Emit
EMIS	Emergency Management Information System	RVP	Reid Vapor Pressure
EPA	Environmental Protection Agency	RATA	Relative Accuracy Test Audit
EQC	Environmental Quality Council	RMP	Risk Management Plan
EP	Emission Point	RTO	Regenerative Thermal Oxidizer
ESP	Electrostatic Precipitator	scf	Standard Cubic Feet
EU	Emission Unit	SIC	Standard Industrial Classification
FID	Facility Identification Number	SIP	State Implementation Plan
FDCP	Fugitive Dust Control Plan	SO ₂	Sulfur Dioxide
FGR	Flue Gas Recirculation	SO _x	Sulfur Oxides
FIP	Federal Implementation Plan	TDS	Total Dissolved Solids
FR	Federal Register	TO	Thermal Oxidizer
ft	Feet	TO/HRSG	Thermal Oxidizer with Heat Recovery Steam Generator
FTIR	Fourier Transform Infrared	tpy	Tons per year
GHGs	Greenhouse Gases	TRS	Total Reduced Sulfur
H ₂ S	Hydrogen Sulfide	TSP	Total Suspended Particulate Matter
HAP	Hazardous Air Pollutant	ULNB	Ultra Low-NO _x Burner
hp	Horsepower	UST	Underground Storage Tank
hr	Hour	UTM	Universal Transverse Mercator
lb	Pound	VHAP	Volatile Hazardous Air Pollutant
LDAR	Leak Detection and Repair	VMT	Vehicle Miles Traveled
LNB	Low-NO _x Burner	VOC	Volatile Organic Compound
LPG	Liquified Petroleum Gas	WDGS	Wet Distiller's Grains with Solubles
MACT	Maximum Achievable Control Technology		
Mgal	One Thousand gallons		
MMBtu	One Million British Thermal Units		
MMscf	One Million Standard Cubic Feet		
MSDS	Material Safety Data Sheet		
MW	Megawatt		

I. GENERAL CONDITIONS

- (A) Coverage granted under this permit is not transferable to another source or location. {Chapter 9}
- (B) Coverage under this permit does not relieve the owner or operator of the source from the responsibility to comply with all applicable portions of the Nebraska Air Quality Regulations and any other requirements under local, State, or Federal law. Any permit noncompliance shall constitute a violation of the Nebraska Environmental Protection Act and the Federal Clean Air Act, and is grounds for enforcement action or permit revocation. {Chapter 41 and Chapter 17, Section 011}
- (C) Application for review of plans or advice furnished by the Director will not relieve the owner or operator of legal compliance with any provision of these regulations, or prevent the Director from enforcing or implementing any provision of these regulations. {Chapter 37}
- (D) Any owner or operator who failed to submit any relevant facts or who submitted incorrect information in a general permit application shall, upon becoming aware of such failure or incorrect submittal, promptly reapply for coverage or submit a construction permit application under the provisions of Chapter 17. {Chapter 17, Sections 006, 007, and 008}
- (E) Approval to construct will become invalid if a continuous program of construction is not commenced within 18 months after the date of coverage granted by this general construction permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time. {Chapter 17, Section 012}
- (F) The owner or operator shall allow the NDEQ, EPA or an authorized representative, upon presentation of credentials to: {Neb. Rev. Statute §81-1504}
- (1) Enter upon the owner or operator's premises at reasonable times where a source subject to this permit is located, emissions-related activity is conducted or records are kept, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (2) Have access to and copy, at reasonable times, any records, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (3) Inspect at reasonable times any facilities, pollution control equipment, including monitoring and air pollution control equipment, practices, or operations, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (4) Sample or monitor at reasonable times substances or parameters for the purpose of ensuring compliance with the permit or applicable requirements.
- (G) When requested by the NDEQ, the owner or operator shall submit completed emission inventory forms for the preceding year to the NDEQ by March 31 of each year. {Chapter 6}
- (H) Open fires are prohibited except as allowed by Chapter 30.
- (I) Particulate Matter – General Requirements: {Chapter 32}
- (1) The owner or operator shall not cause or permit the handling, transporting or storage of any material in a manner, which allows particulate matter to become airborne in such

quantities and concentrations that it remains visible in the ambient air beyond the property line.

- (2) The owner or operator shall not cause or permit the construction, use, repair or demolition of a building, its appurtenances, a road, a driveway, or an open area without applying all reasonable measures to prevent particulate matter from becoming airborne and remaining visible beyond the property line. Such measures include, but are not limited to, paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water; and planting and maintenance of vegetative ground cover.
- (J) If and when the Director declares an air pollution episode as defined in Chapter 38, Section 003.01B, 003.01C, or 003.01D, the owner or operator shall immediately take all required actions listed in Title 129, Appendix I until the Director declares the air pollution episode terminated.
- (K) This permit may be revised (reopened and reissued) or revoked for cause in accordance with Title 129 and Nebraska Administrative Code Title 115 -Rules of Practice and Procedure. Conditions under which this permit will be revised or revoked for cause, include but are not limited to: {Chapter 15, Section 006}
- (1) A determination by the Director, or the Administrator of EPA that:
 - (a) the permit must be revised to ensure compliance with the applicable requirements;
 - (b) the permit contains a material mistake or that inaccurate statements were made in the emissions standards or other terms or conditions of the permit.
- (2) A determination by the Director that the source or activity endangers human health or the environment and that the danger cannot be removed by a revision of the permit.
- (L) Coverage under this permit may be revoked for cause in accordance with Title 129 and Title 115. Conditions under which this permit will be revised or revoked for cause, include but are not limited to: {Title 129, Chapter 15, Section 006}
- (1) The existence at the source of unresolved noncompliance with applicable requirements or a term or condition of the permit, and refusal of the owner or operator to agree to an enforceable schedule of compliance to resolve the noncompliance;
- (2) The failure of the owner or operator to pay a penalty owed pursuant to court order, stipulation and agreement, or order issued by the Administrator of the EPA; or
- (3) The submittal by the owner or operator of false, incomplete, or misleading information to the NDEQ or EPA.

II. SPECIFIC CONDITIONS

(A) The owner/operator of the source shall provide the following notifications to the NDEQ:

- (1) The date construction commenced as defined in Chapter 1. Notification shall be postmarked no later than 30 days after such date and include a summary description and whether the requirement to commence construction was met through: {Title 129, Chapter 17, Section 012}
- (a) Initiating physical on-site construction activities of a permanent nature that meet the definition of “begin actual construction”, or
 - (b) Entering into binding agreements or contractual obligations. If this option is used, the notice shall also include a brief summary of each binding agreement or contractual obligation entered into, the date of the agreement or contract, and why it cannot be cancelled or modified without substantial loss to the owner or operator.
- (2) The notification required in Condition II.(A)(1) shall also include an equipment list which must detail all equipment associated with the facility, including the corresponding maximum capacities of all equipment. {Title 129, Chapter 17, Sections 006, 007, and 008}
- (3) The date on which the source first becomes operational, postmarked within 15 days after such date. {Chapter 7, Section 002.03}

(B) Recordkeeping: Records of all measurements, results, inspections, and observations as required to ensure compliance with all applicable requirements shall be maintained on-site as follows:

- (1) All calculations and records required throughout this permit shall be completed no later than the fifteenth (15th) day of each calendar month and shall include all information through the previous calendar month, unless otherwise specified in this permit.
- (2) All records required throughout this permit shall be kept for a minimum of five (5) years and shall be clear and readily accessible to NDEQ representatives, unless otherwise specified in this permit.
- (3) Copies of all notifications, reports, test results, and plans.
- (4) Calibration records for all operating parameter monitoring equipment.
- (5) Operation and Maintenance manuals, or equivalent documentation, detailing proper operation and maintenance of all permitted emission units, required control equipment, and required monitoring equipment shall be kept for the life of the equipment.
- (6) Records documenting equipment failures, malfunctions, or other variations, including date and time of occurrence, remedial action taken, and when corrections were made to each piece of permitted equipment, required control equipment, and required monitoring equipment.

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- (C) All permitted emission units, control equipment, and monitoring equipment shall be properly installed, operated, and maintained. {Chapter 34, Section 006 and Chapter 35 Sections 006.02 and 006.05}
- (D) When performance testing is required it shall be completed and submitted to the NDEQ as follows: {Chapter 34}
- (1) Performance tests shall be conducted while operating at maximum capacity (operating conditions producing the highest emissions or loading to the control device) within sixty (60) days after first reaching the maximum capacity, but not more than 180 days after the start-up of operations of each unit, unless otherwise specified by the NDEQ.
 - (2) Testing shall be conducted according to the methodologies found in Title 129, Chapter 34, Section 002, or other NDEQ approved methodologies.
 - (3) Performance tests shall be conducted for a minimum of three (3) one hour runs unless another run time is specified by the applicable Standard or as deemed appropriate by the NDEQ.
 - (4) The owner or operator of a source shall provide the NDEQ at least thirty (30) days written notice prior to testing to afford the NDEQ an opportunity to have an observer present. The owner or operator shall also provide the NDEQ with an emissions testing protocol at least thirty (30) days prior to testing. The NDEQ may, in writing, approve a notice of less than 30 days. If the testing is pursuant to an underlying requirement contained in a federal rule, the notice provisions of the underlying requirement apply.
 - (5) The owner or operator shall monitor and record the operating parameters for process and control equipment during the performance testing required in the permit.
 - (6) A written copy of the test results signed by the person conducting the test shall be provided to the NDEQ within sixty (60) days of completion of the test unless a different period is specified in the underlying requirements of an applicable Federal Rule and will, at a minimum, contain the following items:
 - (a) A description of the source's operating parameters (e.g. production rates, firing rates of combustion equipment, fuel usage, etc.), control equipment parameters (e.g. baghouse fan speeds, scrubber liquid flow rates, etc.), and ambient conditions (e.g. weather conditions, etc.) during testing.
 - (b) Copies of all data sheets from the test run(s).
 - (c) A description and explanation of any erroneous data or unusual circumstance(s) and the cause for such situation.
 - (d) A final conclusion section describing the outcome of the testing.
- (E) Any emissions due to malfunctions, unplanned shutdowns, and ensuing start-ups that are, or may be, in excess of applicable emission limits shall be reported to the NDEQ in writing and mailed within 48 hours of the beginning of each period of excess emissions. {Chapter 35, Sections 004 and 005}
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III.(A) Specific Conditions for Emergency Engine(s)**(1) Permitted Emission Points:**

- (a) The source is permitted to construct the emission points and associated emission units identified in the following table at the maximum capacity and combusting the fuel type listed:

Emission Point ID#	Emission Unit Description	Total Capacity (hp)	Permitted Fuel Type
EP- ENGINES	EU Emergency Engines	10,000	Diesel

- (b) All emergency engines covered under this permit shall be model year 2014 or later. {Chapter 17}
- (c) All emergency engines covered under this permit shall have a displacement of less than thirty (30) liters per cylinder. {Chapter 17}

(2) Emission Limitations and Testing Requirements:

- (a) The emergency engines covered under this permit shall comply with the emission limitations of Title 129, Chapter 20, Section 004. {Chapter 20}
- (b) Each emergency engine covered under this permit shall be certified by the manufacturer in accordance with the requirements listed in 40 CFR Part 60 Subpart IIII for the same model year and maximum engine power. {Chapter 17}
- (c) The source shall comply with the applicable emission limitations and testing requirements as specified in 40 CFR Part 60 Subpart IIII, and 40 CFR Part 63 Subpart ZZZZ. {Chapters 18 and 28}

(3) Operational and Monitoring Requirements and Limitations:

- (a) The combined maximum engine output of all emergency engines at the source covered under this permit shall not exceed 10,000 horsepower. {Chapter 17}
- (b) Each emergency engine covered under this permit shall be limited to 500 operating hours per any period of twelve (12) consecutive calendar months. At no time during the first eleven (11) months after startup shall the operation of any engine exceed 500 hours. {Chapter 17}
- (i) Each emergency engine shall be equipped with a non-resettable hour meter to record the operating hours.
- (c) The emergency engines covered under this permit shall combust only Number 2 Fuel Oil. {Chapter 17}

- (d) The source shall comply with the applicable operational and monitoring requirements and limitations as specified in 40 CFR Part 60 Subparts A, IIII. Additionally, the source shall comply with 40 CFR Part 63 Subparts A and ZZZZ. {Chapters 18 and 28}

(4) Applicable NSPS, NESHAP, and MACT Requirements:

The following standards apply to all emergency engines covered by this permit:

Applicable Standard	Title	Rule Citation
NSPS, Subpart A	General Provisions	Title 129, Chapter 18, Sec. <u>001.01</u> 40 CFR 60.1
NSPS, Subpart IIII	Stationary Compression Ignition Internal Combustion Engines	Title 129, Chapter 18, Sec. <u>001.76</u> 40 CFR 60.4200
NESHAP, Subpart A	General Provisions	Title 129, Chapter 28, Sec. <u>001.01</u> 40 CFR 63.1
NESHAP, Subpart ZZZZ	Stationary Reciprocating Internal Combustion Engines	Title 129, Chapter 28, Sec <u>001.88</u> 40 CFR 63.6580

(5) Reporting and Recordkeeping Requirements:

- (a) The source shall maintain records documenting the model year of each emergency engine covered under this permit.
- (b) Records shall be kept demonstrating compliance with the emission standards of 40 CFR Part 60 Subpart IIII.
- (c) The source shall maintain records documenting the maximum engine output capacity of each engine covered under this permit for the lifetime of the equipment.
- (d) The source shall record and maintain records documenting the hours of operation for each emergency engine covered under this permit for each calendar month and for each period of twelve (12) consecutive calendar months.
- (e) The source shall comply with the applicable reporting and recordkeeping requirements as specified in 40 CFR Part 60 Subparts A and IIII and 40 CFR Part 63 Subparts A and ZZZZ.
- (f) The source shall maintain records documenting fuel purchases for each emergency engine covered under this permit.

III.(B) Specific Conditions for External Combustion Units**(1) Permitted Emission Points:**

- (a) The source is permitted to construct the emission points and associated emission units identified in the following table at the maximum capacity and combusting the fuel types listed:

Emission Point ID#	Emission Unit Description	Total Capacity	Permitted Fuel Types
EP-EXTCOMB	EU-EXTCOMB	20 MMBtu/hr	Diesel, LPG, Natural Gas

- (b) The total aggregate combustion capacity of the external combustion units covered under this permit shall not exceed 20 MMBtu/hr. {Chapter 17}

(2) Emission Limitations and Testing Requirements:

- (a) The emissions limitations of Chapter 20, Sections 002 and 004 applies to the emission points identified in Condition III.(B)(1). {Chapter 20}
- (b) The source shall comply with the applicable emission limitations and testing requirements as specified in 40 CFR Part 63, Subparts DDDDD or JJJJJ. {Chapter 28}
- (c) The source shall comply with the applicable emission limitations and testing requirements of 40 CFR 60, Subpart Dc. {Chapter 18}

(3) Operational and Monitoring Requirements and Limitations

- (a) The emission units authorized in Condition III.(B)(1) shall combust only diesel fuel, LPG, and/or natural gas. {Chapter 17}
- (b) The source shall comply with the applicable operational and monitoring requirements and limitations as specified in 40 CFR Part 63 Subparts A and JJJJJ or DDDDD. {Chapter 28}
- (c) The source shall comply with all the applicable operational and monitoring requirements and limitations as specified in 40 CFR Part 60, Subparts A and DC. {Chapter 18}

(4) Applicable NSPS, NESHAP, and MACT Requirements:

The emission units identified in Condition III.(B)(1) may be subject to the NSPS and NESHAP requirements listed below:

Applicable Standard	Title	Rule Citation
NSPS, Subpart A	General Provisions	Title 129, Chapter 18, Sec. <u>001.01</u> 40 CFR 60.1
NSPS, Subpart Dc	Small Industrial-Commercial-Institutional Steam Generating Units	Title 129, Chapter 18, Sec. <u>001.52</u> 40 CFR 60.40c
NESHAP, Subpart A	General Provisions	Title 129, Chapter 28, Sec. <u>001.01</u>

Applicable Standard	Title	Rule Citation
		40 CFR 63.1
NESHAP, Subpart JJJJJ	Industrial, Commercial, and Institutional Boilers Area Sources	Title 129, Chapter 28, Sec. <u>001.71</u> 40 CFR 63.11193
NESHAP, Subpart DDDDD	Industrial, Commercial, and Institutional Boilers and Process Heaters Major Sources	Title 129, Chapter 28, Sec. <u>001.70</u> 40 CFR 63.7480

(5) Reporting and Recordkeeping Requirements:

- (a) Records shall be kept documenting the total aggregate heat input capacity of all external combustion units covered under this permit.
- (b) Records shall be kept documenting the fuel types combusted by all external combustion units covered under this permit.
- (c) The source shall comply with the applicable reporting and recordkeeping requirements as specified in 40 CFR Part 63 Subparts A and JJJJJ or DDDDD.
- (d) The source shall comply with the applicable reporting and recordkeeping requirements as specified in 40 CFR Part 60 Subparts A and Dc.